

**New Hampshire Department of Transportation  
Bureau of Materials & Research**

**Qualified Products List (QPL) – Qualification Criteria**

**Section 645 – Erosion Control, NHDOT Specifications**

**QPL Category: 645.P. Item 645.611 - Bonded Fiber Matrix (BFM)**

**Product Requirements**

Product Description

A Bonded Fiber Matrix (BFM) shall be an extended term Hydraulic Erosion Control Product (HECP). The BFM shall be composed of long strand, non-toxic, and thermally (heated for sterilization purposes) processed fibers. In addition, the BFM shall include water insoluble cross-linked hydro-colloidal tackifiers. The BFM shall consist of prepackaged fibrous materials that perform without the field mixing of additives or components. A BFM shall not be composed of paper, cellulose fiber, or a mixture containing paper or cellulose.

Environmental Compliance

A BFM product shall not contain Polyacrylamide (PAM) or any other substance that would potentially cause an exceedance of water quality standards as set forth in the applicable New Hampshire Department of Environmental Services (NHDES) and United States Environmental Protection Agency (USEPA) regulations.

Duration of Functionality

The product shall not bio-degrade in less than 6 months after application.

Required Performance

When the product is mixed with water and hydraulically applied as slurry, it shall:

- ✓ Dry to form a continuous, porous, absorbent, insoluble erosion resistant matrix;
- ✓ Form a flexible and protective layer;
- ✓ Allow for rapid germination and accelerated plant growth, and;
- ✓ Not dissolve or disperse upon re-wetting, or form a water-resistant crust.

Laboratory Test Performance

<b>Bonded Fiber Matrix</b>		
<b>Property</b>	<b>Test Method</b>	<b>Requirement</b>
C Factor	Large Scale Testing AASHTO ECP 17-01, NTPEP Evaluation of Erosion Control Products (ECP) and Sediment Retention Devices (SRD)	0.05 or Less
Percent Effectiveness	Large Scale Testing AASHTO ECP 17-01	95% minimum
Cure Time	Observed	24 to 48 hours
Vegetation Establishment	ASTM D 7322	400% minimum

**Required Submissions**

*Only complete product submittal packets will be considered for review.*

QPL Product Submittal Form

The submitted form must be the current, on-line version of the form, and must be completely filled out. It can be accessed here: <https://www.nh.gov/dot/org/projectdevelopment/materials/research/products.htm>.

#### Letter of Compliance

A Notarized letter on the manufacturer's letterhead affirming the product meets all Department requirements described herein.

#### Environmental Compliance

A Notarized letter on the manufacturer's letterhead affirming the product does not contain Polyacrylamides (PAM) and complies with all applicable New Hampshire Department of Environmental Services (NHDES) and the United States Environmental Protection Agency (USEPA) regulations.

#### Product Literature

All current product literature, including the technical data sheet and Safety Data Sheet (SDS), relevant to the product's use, limitations, material properties, storage, mixing, application/installation, and all precautions for the product, as applicable.

#### Laboratory Test Results

Product submittals without laboratory test documentation will not be reviewed.

### **Laboratory Testing**

As part of the evaluation, the Department will obtain and review the required test results from the AASHTO National Transportation Product Evaluation Program (NTPEP). Visit [www.ntpep.org](http://www.ntpep.org) for information about submitting products to this program.

#### NTPEP Index and Bench-Scale Test Results

The Department requires NTPEP index and bench-scale test results for all new products and for approved QPL listed products due to expire (see "**QPL Expiration Date / Product Test Frequency**" section).

#### NTPEP Large-Scale Test Results

The Department requires NTPEP large-scale test results for all products. The large-scale test is typically performed one-time and is non-cyclical. Retesting will be required if significant changes are reported in the index or bench scale results. Products will not be qualified for performance levels that exceed those in the published product literature.

### **Product Performance Monitoring / Removal from QPL**

Product field performance and the product's technical data will be monitored by the Department. If either fails to meet the criteria noted herein, the product will be immediately removed from the QPL without notice to the manufacturer.

### **Changes to Product Name, Manufacturer, or Formulation, of a Currently-Listed QPL Product**

The Department's Product Evaluation Unit (PEU) shall be contacted immediately when a change to any of the following is made to a product currently listed in the QPL:

- Product Name
- Product Manufacturer
- Product Formulation

For a change in the product name and/or manufacturer, the product will remain in the QPL reflecting that change upon receipt of verification from the current or new manufacturer attesting the product formulation is unchanged. Verification shall consist of a letter signed by the manufacturer's representative.

For a change in product formulation, the PEU will determine whether:

1. The formulation change could adversely affect the product's required performance, whereupon, it will be subject to removal from the QPL; or,
2. The formulation change will not adversely affect the required performance of the product for its intended use; whereupon, the product will remain in the QPL.

If at any time it is determined that a product name, manufacturer, or formulation has changed without the required notification to the PEU, the product is subject to immediate removal from the QPL at the discretion of the Product Evaluation Unit. The product will not be re-listed in the QPL until the manufacturer provides the proper notification.

### **QPL Expiration Date / Product Test Frequency**

Qualified products in this QPL section will be listed for 3 years from the date of the most current laboratory test result documentation. Based on this date, a corresponding expiration date will be assigned and will be shown in the QPL. For the product to be listed in the QPL past its assigned expiration date, the manufacturer/supplier shall submit new NTPEP test result documentation that verifies current qualification criteria conformance. The test result documentation

shall be submitted with sufficient lead time prior to the expiration date to allow for the PEU's review. Products without current acceptable index and/or bench scale test result documentation will be removed from the QPL upon reaching the expiration date.

#### **Product Marking and Labeling**

The product label shall be marked with the information as required by the applicable specification(s). If a product was converted and/or relabeled from its original manufacturer, the product name on the packaging and all accompanying literature shall be that of the convertor or private label company.

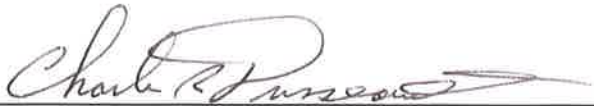
#### **Limitations**

The Department continues to evaluate its qualification criteria as well as products that have been qualified against them, and reserves the right to revise the criteria and/or withdraw product qualification at any time for any reason without notice. Qualification of a product does not constitute an endorsement of the product, nor does it imply intent to purchase or specify the product.

#### **Qualification Criteria Approved by:**



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